



Local Public Health Preparedness: how can we measure it? *Experience in Kansas*

Gianfranco Pezzino, MD, MPH
Kansas Health Institute



Introduction

Today's goals:

1. Describe one project of statewide local preparedness assessment ("case study")
2. Describe some lessons learned
3. Define challenges ahead





The need to measure preparedness



1. Accountability
 - Billions of \$ have been invested, need to show results
2. Program planning and management
 - Officials need to know where the gaps are to make sound plans and decide budget allocations



The “PHPPPO tool”

- *Public Health Preparedness and Response Capacity Inventory*
 - Aug 2002, updated in Dec 2002
- “Rapid” self-assessment for state and local PH agencies
 - Track progress for CDC cooperative agreement
 - Guide to planning future activities



The Kansas Public Health System

- 105 counties
 - 91 (87%) are rural
- 99 local health departments
 - All counties served by a LHD
 - Independent jurisdictions
 - KS Association of LHD (KALHD)
- Kansas Department of Health and Environment
 - Support to LHD (technical, financial)



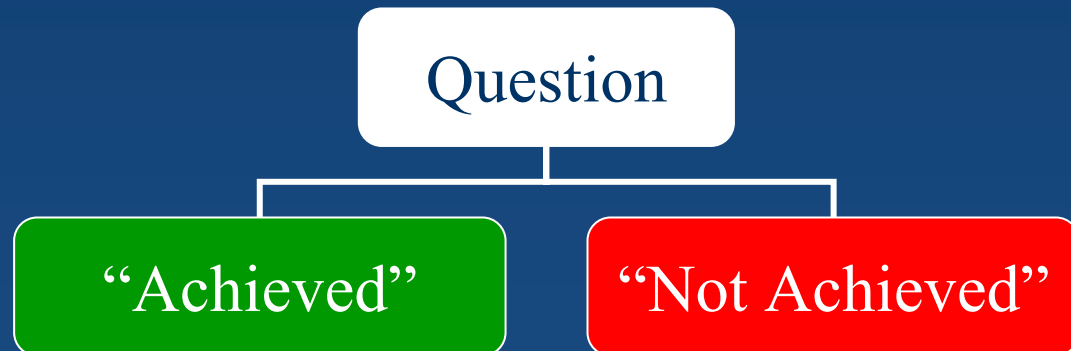
The Project

- Baseline and follow-up surveys in 2002 and 2003 – modified PHPPO tool
 - 103/105 (98%) counties responded to both surveys
- Preparedness Indexes created
- Results compared by:
 - ✓ Whole state
 - ✓ Focus Areas
 - ✓ Population density groups
- Report released in July, 2004



Methods - Step 1: Question Achievement

- Criteria for “achievement” developed
- Individual answers classified





Example 1 (simple question)

Q 25

Does the agency have copies of prepared
medical management information?

Yes

No

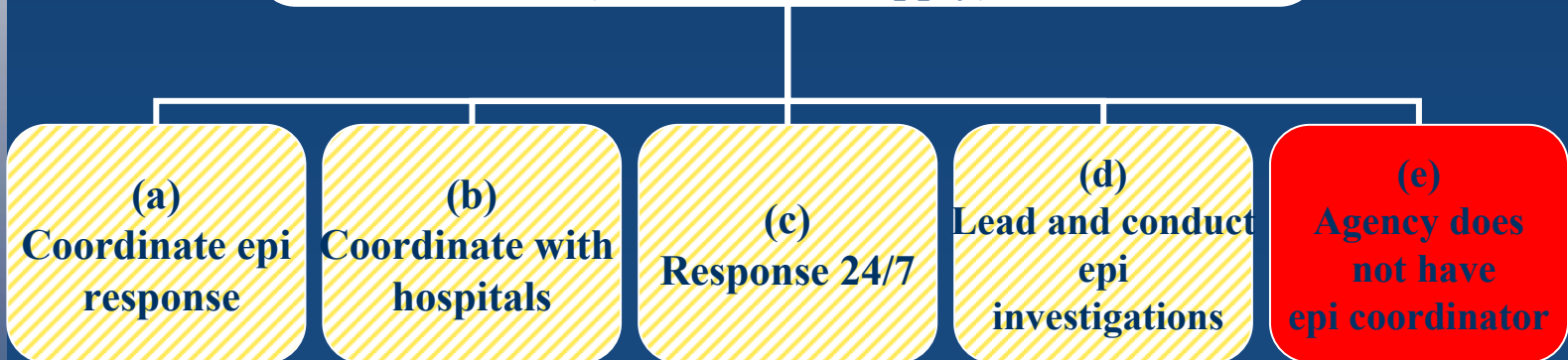
If answer = Yes, then scored as “achieved”



Example 2 (complex question)

Q 26

Which responsibilities has the agency assigned to its epidemiology response coordinator?
(Check all that apply)

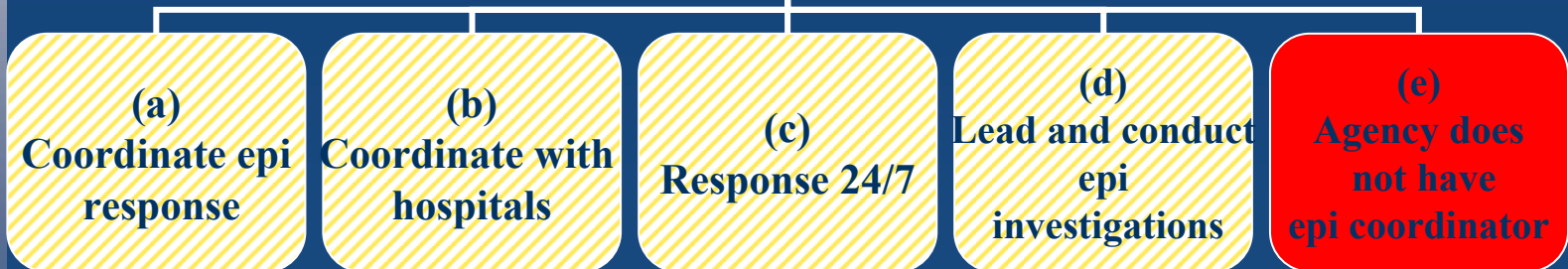




Example 2 (complex question)

Q 26

Which responsibilities has the agency assigned to its epidemiology response coordinator?
(Check all that apply)



If (e) = N AND >2 options = Y THEN Achieved = Yes



Methods - Step 2: Critical Capacities Indexes

- Questions grouped into critical capacities
 - E.g., Q. 1 through 6 = C.C. A-I-A
 - Q. 19 through 24 = C.C. B-I-A
- **Local Critical Capacity Index** = percentage of questions achieved for that critical capacity in each county
- **State index** = average of local indexes

Figure 3 Critical Capacity Preparedness Indexes
Kansas, 2002 and 2003 - State Average

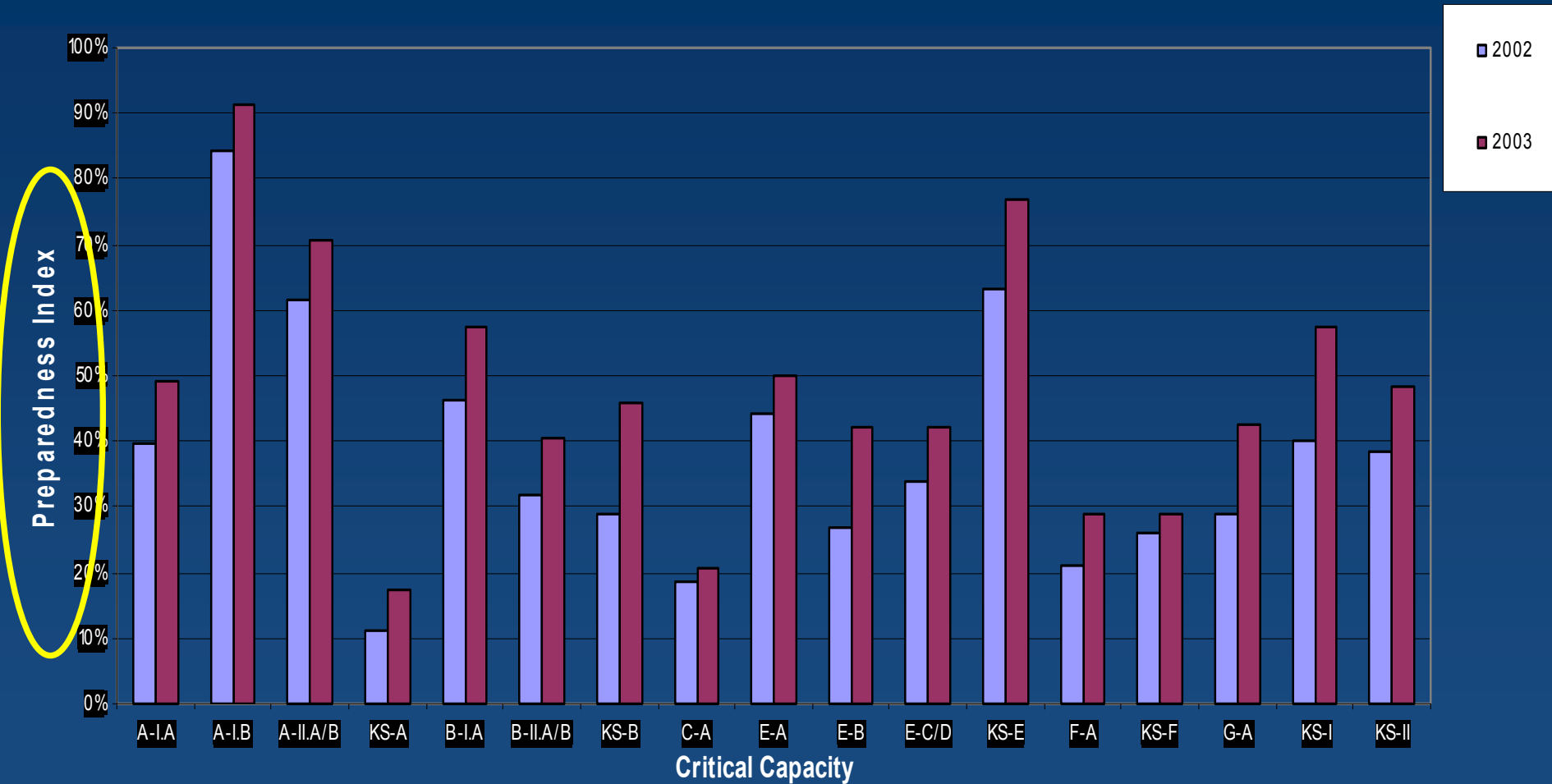
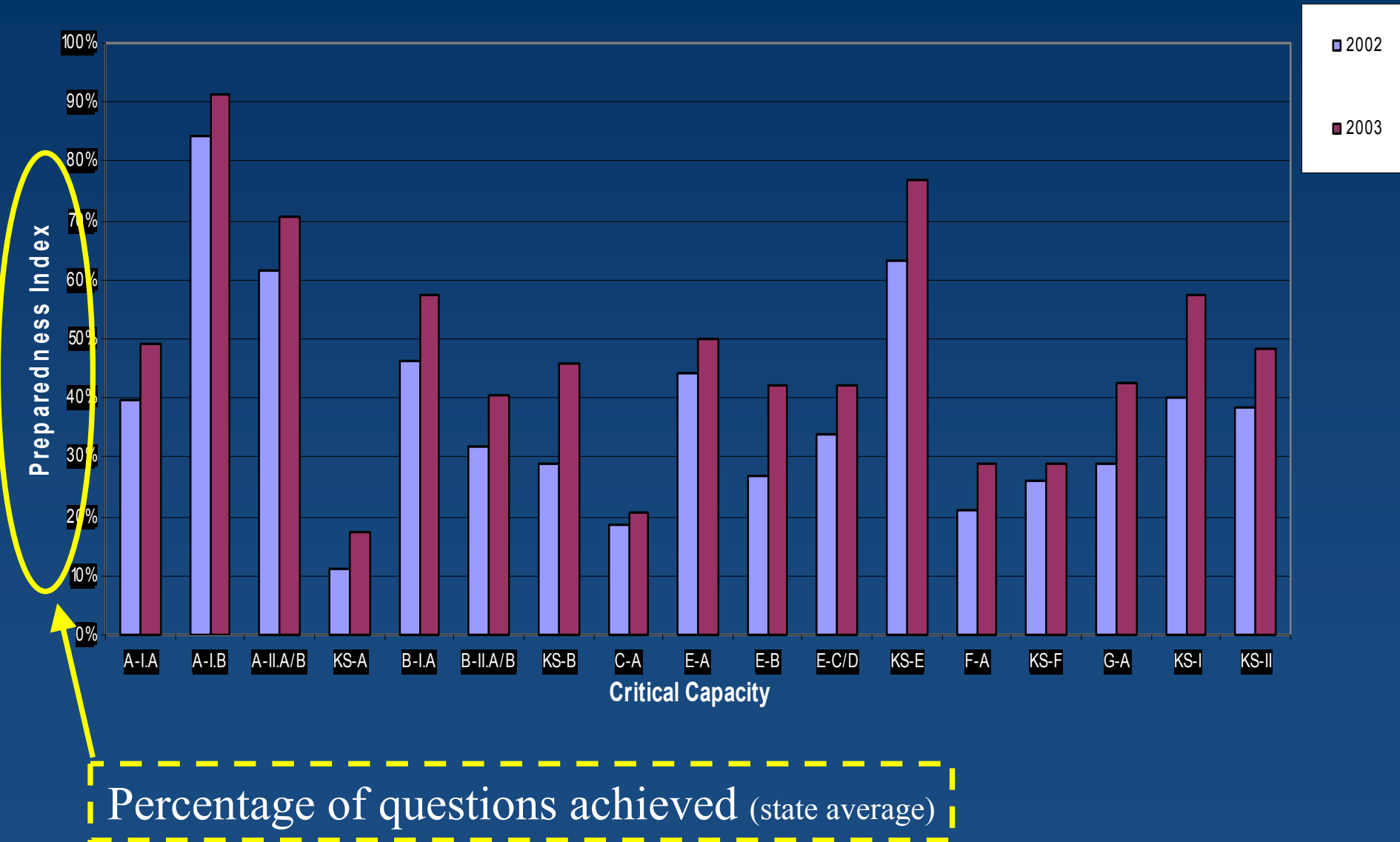


Figure 3 Critical Capacity Preparedness Indexes
Kansas, 2002 and 2003 - State Average

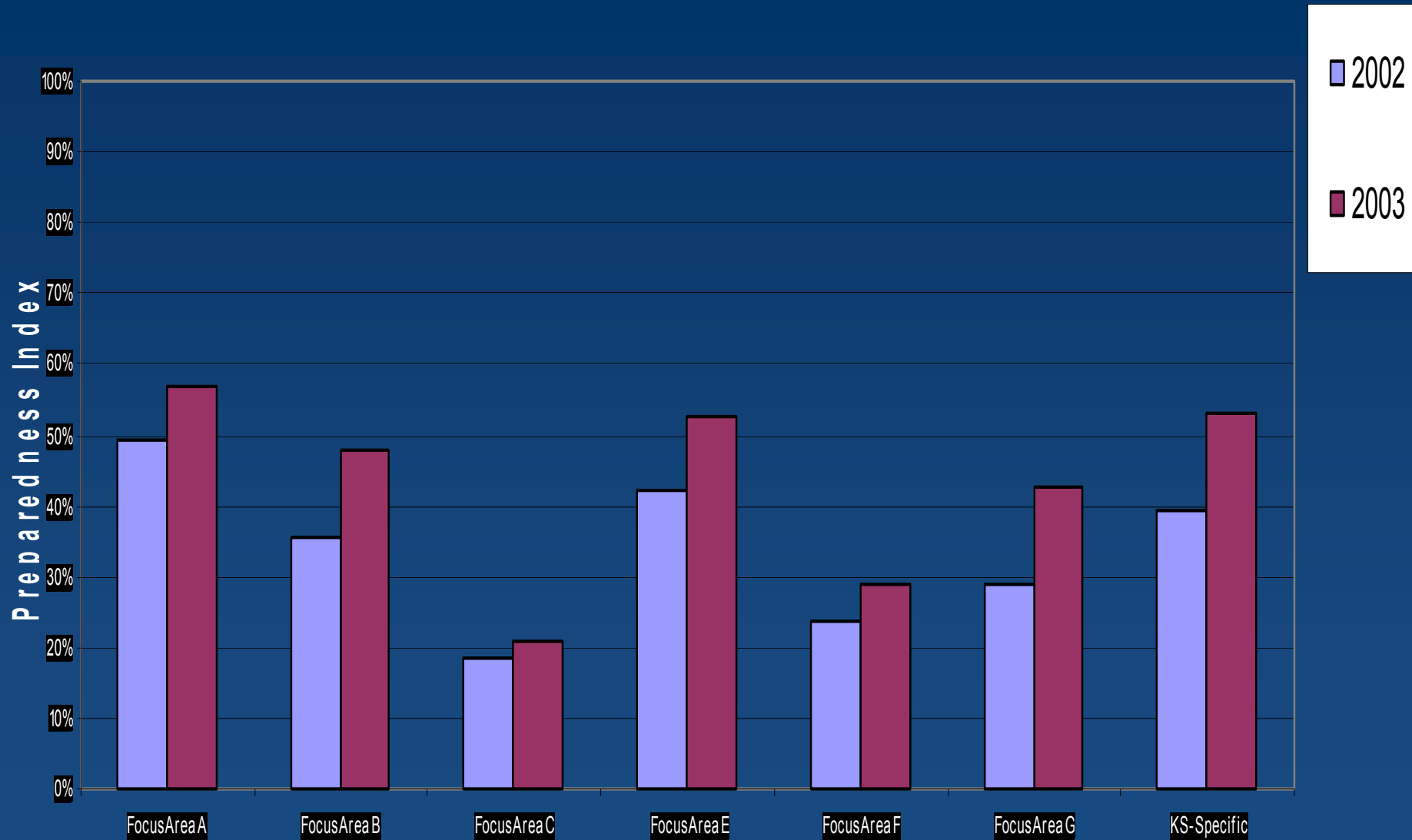




Methods - Step 3: Focus Areas Indexes

- Critical capacities grouped into focus areas
- **Local Focus Area Index** = average of critical capacity indexes for a focus area in each county
- **State** index computed as average of local indexes

Figure 2. Focus Areas and Overall Preparedness Indexes
Kansas, 2002 and 2003 - State Average





Methods - Step 4: Overall Preparedness Index

- **Local Overall Preparedness Index**
= average of all focus area indexes in each county
- **State** index computed as average of all county indexes



Key Findings

- 1) Preparedness for bioterrorism improved



State Average of Local Preparedness Indexes by Focus Area and Year

Focus Area	2002 Baseline	2003 Follow-up	Proportional Increase
A – Planning and Assessment	49.3 %	57.1 %	15.8%
B – Surveillance and Epidemiology	35.6 %	47.9 %	34.3%
C – Laboratory	18.7 %	20.6 %	10.4%
E – Communication & Information Technology	42.0 %	52.8 %	25.7%
F – Risk Communication & Health Info Dissemination	23.6 %	28.9 %	22.6%
G – Education, Training	28.7 %	42.6 %	48.3%
KS-Specific Areas	39.2 %	52.9 %	34.8%
State Overall Preparedness Index	33.9 %	43.3 %	27.7%



Key Findings

- 1) Preparedness for bioterrorism improved
- 2) Substantial room for improvement remains

State Average of Local Preparedness Indexes by Focus Area and Year

Focus Area	2002 Baseline	2003 Follow-up	Proportional Increase
A – Planning and Assessment	49.3 %	57.1 %	15.8%
B – Surveillance and Epidemiology	35.6 %	47.9 %	34.3%
C – Laboratory	18.7 %	20.6 %	10.4%
E – Communication & Information Technology	42.0 %	52.8 %	25.7%
F – Risk Communication & Health Info Dissemination	23.6 %	28.9 %	22.6%
G – Education, Training	28.7 %	42.6 %	48.3%
KS-Specific Areas	39.2 %	52.9 %	34.8%
State Overall Preparedness Index	33.9 %	43.3 %	27.7%



Key Findings

- 1) Preparedness for bioterrorism improved
- 2) Substantial room for improvement remains
- 3) Wide variability in preparedness exists by counties, regions, and critical capacity areas

Range of County Preparedness Index in Kansas, 2003

Local Overall Index (State Average)	43.3 %
Local Overall Index Range	17.3 % to 75.5 %
Ratio highest index : lowest index	4.4



Key Findings

- 1) Preparedness for bioterrorism improved
- 2) Substantial room for improvement remains
- 3) Wide variability in preparedness exists by counties, regions, and critical capacity areas
- 4) Preparedness levels tend to be lower in rural than urban areas

Local Preparedness Index by Population Density in Kansas, 2003

	Frontier	Rural	Densely Settled Rural	Semi-Urban	Urban
Overall Index (Average)	38.1 %	41.3 %	47.7 %	52.0 %	55.8 %
Overall Index (Range)	18.9 % to 67.1 %	17.3 % to 60.9 %	32.9 % to 67.2 %	35.3 % to 73.3 %	35.7 % to 75.5 %
Ratio highest index : lowest index in group	3.6	3.5	2.0	2.1	2.1



So, now how do we use (and not use)
these numbers?



City/Local

Lawrence, Kansas

[Home](#) → [City/Local News](#) → story

[Discuss story](#) [E-mail story](#) [Printer Friendly](#) [E-mail editor](#)

Report: Counties make strides in preparing for bioterrorism

By **Scott Rothschild**, Journal-World
FRIDAY, JULY 23, 2004

TOPEKA — State officials Friday released a report that says county health departments are making significant improvement in preparing for potential bioterrorism attacks.

But good luck trying to find out how an individual county health department is doing.

INTERNET **ENHANCED**

**Bioterrorism and
Emergency
Preparedness of Local
Health Departments in
Kansas: 2003. Full
report. (.pdf)
Executive
Summary. (.pdf)**

The \$165,000, 122-page report doesn't identify the performance of specific counties, and state officials refused to disclose that information.

Information on which counties are doing a good job and which ones aren't could help terrorists, said Richard Morrissey, acting director of health for the Kansas Department of Health and Environment.

"We're trying to avoid a ranking," he said.

Local health departments have received \$11.4 million over the past two years to improve their

levels of preparedness, officials said.

The new study covers the first year of increased bioterrorism funding -- \$5.3 million -- from August 2002 to August 2003. During that period, local health departments statewide improved preparedness levels by 27.7 percent, the study said.

"The findings are very positive," Morrissey said.

Health officials say the bioterrorism funds have also helped counties respond to other public health emergencies, such as natural disasters.

But the report also indicated there was a wide disparity in preparedness levels with rural areas lagging behind the rest of the state. The report is based on surveys completed by local health departments.

ON THE STREET

What is your favorite type of cheese?

"Havarti, because it's smooth, mild and creamy."

— **Emily Andrezik**, Kansas University junior, Lawrence



[Read more and add your thoughts \(17 comments\)](#)

advertisement



TOP ADS

- **DIRECTOR OF NURSES Seeking RN to fill...**
- **Dietary Manager Now accepting resumes. Prefer...**
- **DRIVER Established, growing company needs...**
- **ASSISTANT MANAGER Rod's Hallmark has a...**
- **TEACHING COUNSELORS, RECREATION COUNSELORS, ...**

[More Top Job ads »](#)

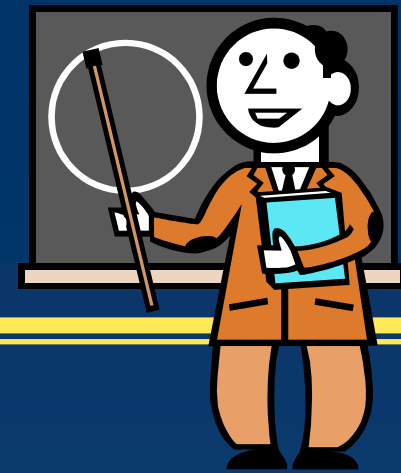
[Top Rental ads »](#)

[Top Transportation ads »](#)

advertisement



Conclusions



1. Structured assessments can provide helpful information
 - Tracking progress
 - Plan resource allocation
2. Assessment would be more meaningful with “gold standards”, clear objectives
 - To know if you are on the right track you need to know where you want to go first
3. Therefore, we desperately need good, measurable indicators



We desperately need good indicators

- Can be quantified (i.e., measured and counted)
- Measure what matters
 - Linked to public health goals
- Understandable to policy makers, public
 - Defensible and logical
- Allow monitoring of trends
 - Sensitive to changes
 - Timely measured
- Allow comparisons
 - Reliability
- Can be monitored without excessive burden
 - Use available data and information systems, when possible



The Challenges Ahead

- “Not everything that counts can be counted, and not everything that can be counted counts” (A. Einstein)
- “What gets measured gets done” (Ed Thompson et al.)
- “Let us not make the perfect the enemy of the good” (me)